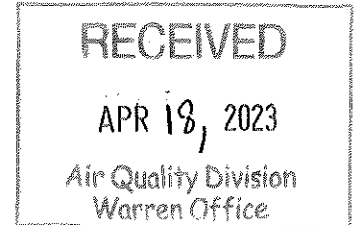


PPG Coatings Services
12020 Shelby Tech Dr.
Shelby Township, MI 48316
T: 586-803-1003
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Jonathan Rasmussen
General Manager

April 17, 2023

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division, Warren District Office
27700 Donald Court
Warren, MI 48092-2793



**Re: The Crown Group - Shelby (PPG) Plant, SRN: N7426
12020 Shelby Tech Drive, Shelby Township, MI 48316
Response to Violation Notice, dated March 28, 2023**

Mr. Pierce:

I am writing in response to the above-referenced Violation Notice from the Michigan Department of Environment, Great Lakes, and Energy (EGLE), dated March 28, 2023, that was sent to The Crown Group - Shelby Plant (the "Facility"), located at 12020 Shelby Tech Drive, Shelby Township, MI. The Crown Group Shelby Plant is owned and operated by The Crown Group Company, which is a wholly-owned subsidiary of PPG Industries, Inc. PPG is timely submitting this response by April 18, 2023, as requested in the Violation Notice.

Alleged Areas of Noncompliance:

- 1. The Crown Group failed to maintain temperature data records in a satisfactory manner. Temperature data records requested during the inspection in June 2022 were found to be corrupt. Additionally, records were found to be corrupt for several months from 2021 through 2023. The Crown Group was given time to send the data logger to the manufacturer in an attempt to retrieve the requested data, however this attempt was unsuccessful.*

Response: This alleged area of noncompliance has been resolved as of March 17, 2023, when a new digital data temperature logger was installed at the Facility. The new logger was installed, and temperature files downloaded and verified from March 17 through March 19, 2023. Those files were sent to Mr. Pierce (EGLE) on March 20, 2023, for his review. The failed data logger was sent back to the manufacturer for them to retrieve the temperature files from the device. However, the data logger manufacturer was unable to retrieve the data, stating that the entire stored data set was corrupt. The new data logger is expected to be hooked up directly to the internet, with temperature files backed up on a server, to help prevent occurrences of missing or corrupted data in the future.

2. *The facility had previously operated under the Rule 290 exemption for their E-Coat coating. Upon further review of the ingredients listed in the Safety Data Sheet (SDS) for their E-Coat coating, there is an ingredient (bis(2-(2-butoxyethoxy) methane) whose estimated emissions, based on the lowest recorded E-Coat monthly usage from 2021-2023, exceed the 20 lbs/month limit stated in Rule 290(2)(a)(ii)(a). Thus, the E-Coat process is no longer exempt and is in violation of Rule 201.*

Response: As discussed more fully below, PPG maintains that the E-Coat process is exempt from permitting under AQD Rule 290(2)(a) because (1) bis(2-(2-butoxyethoxy) methane does not volatilize in the E-Coat process to create emissions and (2) even if bis(2-(2-butoxyethoxy) methane is treated as a traditional VOC, its actual content as an ingredient in E-Coat is less than 3%, which results in actual emissions of less than 20 pounds per month.

As background, the Facility voluntarily began pursuing an air permit for the E-Coat process after EGLE requested that one should be obtained after the air inspection on July 30, 2021 and EGLE's subsequent October 20, 2021 inspection report, where EGLE alleged the E-Coat process may not be exempt from AQD Rule 201 requirements based on estimated monthly emissions of more than 20 pounds of bis(2-(2-butoxyethoxy) methane. PPG voluntarily submitted a Permit to Install (PTI) application (No. APP-2022-0226) for the E-Coat process on September 6, 2022 to address this EGLE inspection finding. PPG subsequently voided the application on December 1, 2022, after multiple conversations because agreement could not be reached with the EGLE Permit Section for the protection from public disclosure under Michigan FOIA of the requested proprietary and trade secret product compositions used at the Facility.

Even though PPG voluntarily submitted the now voided PTI application for the E-Coat process, PPG maintains that the E-Coat process is exempt from permitting under AQD Rule 290(2)(a) because (1) bis(2-(2-butoxyethoxy) methane does not volatilize in the E-Coat process to create emissions and (2) even if bis(2-(2-butoxyethoxy) methane is treated as a traditional VOC, its actual content as an ingredient in E-Coat is less than 3%, which results in actual emissions of less than 20 pounds per month. The ingredient at issue, bis(2-(2-butoxyethoxy) methane (CAS # 143-9-23), in the E-Coat coating material is not a volatile compound. The primary function of bis(2-(2-butoxyethoxy) methane in the E-Coat is as a plasticizer, which remains part of the cured film on the coated parts.

Notably, the vapor pressure of bis(2-(2-butoxyethoxy) methane at 25 °C is less than 9.78×10^{-5} mmHg, and at the E-Coat process operating temperature of 400°F², the vapor pressure is 1.94 mmHg, as calculated using the Clausius-Clapeyron equation. Accordingly, no volatile emissions of bis(2-(2-butoxyethoxy) methane would occur as part of the E-Coat process at the facility, based on the vapor pressure of the material. This is also supported by the Environmental Data Sheet (EDS) for E-Coat, as bis(2-(2-butoxyethoxy) methane is not listed as a volatile component. *See Attachment A.*

¹ See EU ECHA Registration Dossier for bis(2-(2-butoxyethoxy) methane available at <https://echa.europa.eu/bg/registration-dossier/-/registered-dossier/13599/4/7>.

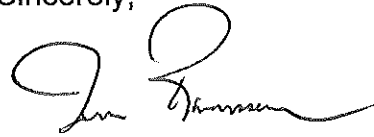
² At the Facility, the E-coat cure oven operates at 370°F to 385°F, and the powder cure oven operates at roughly 400°F.

Additionally, even if bis(2-(2-butoxyethoxy) methane is treated as a traditional VOC, its actual content, as an ingredient in E-Coat, is less than 3%, which results in estimated emissions of well less than the 20 pounds per month limit (assuming 3,000 gallons of E-Coat usage per month at the Facility) under AQD Rule 290(2)(a)(ii)(a)).

In sum, as explained above, the emissions of bis(2-(2-butoxyethoxy) methane from the E-Coat process does not exceed the limit of 20 lbs per month under AQD Rule 290(2)(a)(ii)(a)), and as such, PPG maintains that the process is exempt from permitting under AQD Rule 290. Accordingly, PPG requests a written determination from EGLE AQD on the exemption status of the Crown Group Shelby Facility's E-Coat process.

PPG believes that the corrective actions taken and explanations above, fully resolve the allegations as described in the Violation Notice dated March 28, 2023. Should you have any questions or require additional information, please contact Jason Nowak at your convenience at 248.408.8354 or jnowak@ppg.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Rasmussen", with a long horizontal flourish extending to the right.

Jon Rasmussen
Plant Manager
The Crown Group - Shelby Plant

Cc: Ms. Jenine Camilleri
Department of Environment, Great Lakes, and Energy
Air Quality Division – Enforcement Unit Supervisor
P.O. Box 30260
Lansing, MI 48909-7760